REMARKS

To accommodate the USPTO and to advance prosecution, claims 52-70 (reintroduced claims corresponding to Group X), corresponding with the requirement to correct the claim numbering, have been elected. The remaining claims have been cancelled without prejudice. Please note that as per the Examiner's request, the status indicators in the present response are limited to 'original,' 'new,' 'amended,' or 'cancelled.' Thus, all instances in the original election indicating that a claim was 'withdrawn' now indicates that the claim is 'cancelled.' However, the applicant contends that the initial response conformed with 37 CFR 1.121; the instant agreement made solely to advance prosecution.

Minor changes were made to the specification to make the disclosure consistent with the sequence listing. Specifically, SEQ ID NO: 19 refers to PRT of West Nile Virus. In the paragraphs where amendments are made, SEQ ID NO: 19 is incorrectly identified as belonging to Domain III. However, SEQ ID NO: 20 and SEQ ID NO: 21 are the relevant sequences of Domain III, which is reflected in the amendment to the specification.

Due to the original misnumbering of claims in the original specification, the following actions were taken in order to address (1) the restriction requirement, and (2) the duty to correct the claim numbering:

1. The original claims corresponding to Group X were cancelled without prejudice.

2. The claims corresponding to Group X were reintroduced as claims 52-53, 55-64, 66-67, and 70. Claim 31 (corresponding to original claim 30) was cancelled without prejudice and not reintroduced.

3. Claims 53, 56, and 67 are new claims derived from originally presented claims 30, 33, and 43 (corresponding to original claims 29, 32, and 42). These claims substitute SEQ ID NO: 20 for SEQ ID NO: 19. SEQ ID NO: 19 is not drawn to Domain III of the envelope protein of flavivirus. Both SEQ ID NO: 20 and SEQ ID NO: 21 are drawn to Domain III of the envelope protein of flavivirus, which should necessitate a single search. Thus, claims drawn to both SEQ ID NO: 20 and SEQ ID NO: 21 constitute only a single invention and are consistent with the election made.

4. Claims 54, 65, 68, and 69 are claims not originally presented. They claim subject matter contemplated as part of and consistent with the restriction requirement.

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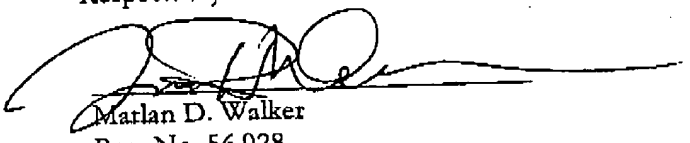
Please see Appendix A for a listing of the text of all of the original claims (renumbered as referenced in the restriction requirement). It is respectfully requested that this case is in a condition for allowance and examination of this application on the merits is respectfully requested.

Although no fees are believed to be due with this response, any additional fee(s) or any underpayment of fee(s), or to credit any overpayments may be made to Deposit Account Number 50-2638. Please ensure that Attorney Docket Number 59419-010102 is referred to when charging any payments or credits for this case.

Date: January 23, 2006

Respectfully submitted,



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Appendix A

1. A method for controlling a flavivirus entry into a cell, comprising administering to the cell an agent functionally interfering with a flavivirus receptor protein, the flavivirus receptor protein being an integrin.

2. The method of claim 1, wherein the integrin comprises integrin subunit β3 or integrin subunit αV.

3. The method of claim 1, wherein the integrin is an αVβ3 integrin.

4. The method of claim 3, wherein the flavivirus receptor protein is polypeptide from Vero Cells, having approximately a 105KDa molecular weight and comprising portions with a sequence substantially homologous to SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4 and SEQ ID NO: 5.

5. The method of claim 1, wherein the agent functionally interfering with a flavivirus receptor protein is a functional blocking antibody against the integrin.

6. The method of claim 1, wherein the agent functionally interfering with a flavivirus receptor protein is a competitive ligand for the integrin.

7. The method of claim 6, wherein the competitive ligand is an RGD peptide.

8. The method of claim 6, wherein the competitive ligand is a natural ligand selected from the group consisting of fibronectin, vitronectin, laminin and chrondriotin.

9. The method of claim 6, wherein the flavivirus is a member of Japanese encephalitis serocomplex.

10. The method of claim 9, wherein the flavivirus is West Nile Virus.

11. The method of claim 1, wherein the cell is a cell of a vertebrate.

12. A method for controlling flavivirus entry into a cell, comprising administering to the cell an agent interfering with the expression of a flavivirus receptor protein, the receptor protein being integrin.

13. The method of claim 12, wherein the agent is a siRNA against the integrin.

14. A kit for controlling entry of a flavivirus into a cell, the kit comprising:

the flavivirus; and

an agent functionally interfering with an integrin,

the flavivirus and the interfering agent to be used according to the method of claim 1.

15. The kit of claim 14, wherein the agent functionally interfering with an integrin is a functional blocking antibody against the integrin.

16. The kit of claim 14, wherein the agent functionally interfering with an integrin is a competitive ligand for the integrin.

17. A kit for controlling entry of a flavivirus into a cell, the kit comprising:

the flavivirus; and

an agent interfering with expression of an integrin,

the first flavivirus and the interfering agent to be used according to the method of claim 12.

18. The kit of claim 17, wherein the interfering agent interfering with the expression of an integrin is an SiRNA against the integrin.

19. A method for controlling a flavivirus entry into a cell, the cell having a plasma memebra, the method comprising administering to the cell an interfering agent functionally interfering with an ATPase in the plasma membrane of the cell.

20. The method of claim 19, wherein the interfering agent is a functional blocking antibody against the ATPase.

21. The method of claim 19, wherein the agent functionally interfering with a flavivirus receptor protein is a competitive ligand for the ATPase.

22. A kit for controlling entry of a flavivirus into a cell, the cell having a plasma membrane, the kit comprising:

the flavivirus; and

an agent functionally interfering with an ATPase located in the plasma membrane of the cell,

the flavivirus and the intefering agent to be used according to the method of claim 19.

23. The kit of claim 21, wherein the interfering agent is a functional blocking antibody against the ATPase.

24. A method for controlling a flavivirus entry into a cell, comprising administering to the cell an agent functionally interfering with a flavivirus receptor protein, the receptor protein being a neurotensin receptor.

25. The method of claim 23, wherein the agent functionally interfering with a flavivirus receptor protein is a functional blocking antibody against the neurotensin receptor.

26. The method of claim 23, wherein the agent functionally interfering with a flavivirus receptor protein is a competitive ligand for the neurotensin receptor.

27. The method of claim 25, wherein the competitive ligand is neurotensin.

28. A kit for controlling entry of a flavivirus into a cell, the kit comprising:

the flavivirus; and

an agent functionally interfering with a neurotensin receptor located in the plasma membrane of the cell,

the flavivirus and the intefering agent to be used according to the method of claim 23.

29. A method for controlling entry of a flavivirus into a cell, the flavivirus exhibiting a flavivirus envelope protein, the flavivirus envelope protein comprising a domain III of the flavivirus envelope protein, the method comprising administering to the cell an agent functionally interfering with the domain III of the flavivirus envelope protein.

30. The method of claim 28, wherein the domain III has a sequence substantially homologous to SEQ ID NO: 19 or SEQ ID NO: 21.

31. The method of claim 29, wherein the agent is an antibody against the domain III.

32. A method for treating a flavivirus infection in a vertebrate, the flavivirus exhibiting a flavivirus envelope protein, the flavivirus envelope protein comprising a domain III, the method comprising

administering to the vertebrate a pharmaceutically effective amount of an agent functionally inhibiting the domain III of the envelope protein of the flavivirus.

33. The method of claim 31, wherein the domain has a sequence substantially homologous to SEQ ID NO: 19 or SEQ ID NO: 21.

34. The method of claim 31, wherein the agent is a functional blocking antibody against the domain III.

35. The method of claim 31, wherein the agent is a competitive ligand of domain III.

36. The method of claim 31, wherein the flavivirus is a member of the Japanese encephalitis serocomplex.

37. The method of claim 35, wherein the flavivirus is West Nile Virus.

38. The method of claim 31, wherein the vertebrate is a human being.

39. Pharmaceutical composition for the treatment of a flavivirus infection in a vertebrate, the flavivirus exhibiting an envelope protein comprising a domain III, the pharmaceutical composition comprising:

a pharmaceutically effective amount of an agent functionally inhibiting the domain III of the envelope protein and a pharmaceutically acceptable carrier, vehicle or auxiliary agent.

40. The pharmaceutical composition of claim 38, wherein the interfering agent is a functional blocking antibody against the domain III.

41. The pharmaceutical composition of claim 40, wherein the interfering agent is competitive ligand for the domain III.

42. A method for inducing immunity to a flavivirus in a vertebrate susceptible to infection of the flavivirus, the flavivirus exhibiting an envelope protein comprising a domain III, the method comprising:

administering to the vertebrate an immunogenic amount of a polypeptide comprising the domain III of the envelope protein of the flavivirus.

43. The method of claim 41, wherein the domain III comprises a portion having a sequence substantially homologous to SEQ ID NO:19 or SEQ ID NO: 21.

44. A vaccine for a flavivirus, the flavivirus exhibiting an envelope protein comprising a domain III, the vaccine comprising, as an active agent, a polypeptide comprising the domain III of the envelope protein of the flavivirus.

45. A method for diagnosing a flavivirus infection in a vertebrate susceptible to be infected by the flavivirus, the method comprising:

contacting a sample tissue from the vertebrate, with an integrin or neurotensin protein associated with an identifier;

detecting presence or absence of a flavivirus-integrin complex or flavivirus-neurotensin complex by detecting presence of the identifier.

46. A kit for the diagnosis of flavivirus infection in a vertebrate, susceptible to be infected with the flavivirus, the flavivirus exhibiting an envelope protein comprising a domain III, the kit comprising:

at least one agent able to bind the domain III, associated with an identifier, and

one or more reagents able to detect the identifier,

the at least one agent able to bind domain III and the one or more reagents to be used according to the method of claim 44.

47. A diagnostic method to analyze a cell susceptibility to flavivirus infection, the method comprising

contacting the cell with an identifier for the presence or expression of an integrin, neurotensin receptor and or ATP-ase; and

detecting the presence of the identifier.

48. A kit to analyze a cell susceptibility to flavivirus infection, the kit comprising:

an identifier for the presence or expression of an integrin, neurotensin receptor and or ATP-ase; and

a reagent able to detect the presence of the identifier,

the identifier and the reagent to be used in the method of claim 46.

49. Isolated and purified polypeptide from Vero Cells, having approximately a 105KDa molecular weight and comprising portions with a sequence substantially homologous to SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4 and SEQ ID NO: 5 .

50. A polypeptide having a sequence substantially homologous to SEQ ID NO:20 or SEQ ID NO: 21.

51. An antibody against a polypeptide from Vero Cells, having approximately a 105KDa weight and comprising portions with a sequence substantially homologous to SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4 and SEQ ID NO: 5.

52. An antibody against a polypeptide having a sequence substantially homologous to SEQ ID NO:19 or SEQ ID NO: 21.